



NOTEBOOKS FAQ

Q I want to play the latest PC games such as F.E.A.R. and World of Warcraft, but I don't want a desktop PC cluttering up my flat. Is a notebook a suitable alternative?

A Not long ago gamers scoffed at notebooks for their lacklustre 3D performance. But things have changed and now notebooks benefit from mobile versions of the latest graphics chipsets shortly after they appear in desktop PCs.

Many slim notebooks now carry mid-range graphics chipsets, such as the Gateway 8550GB reviewed this month (right) with its X700 chipset. These are capable of playing any game you want, but you will have to reduce detail settings and resolutions to make them playable.

If you want more power, you'll have to buy a larger desktop replacement notebook. These can accommodate a fast desktop processor and a top-of-the-range graphics chipset. An extreme example of this kind of notebook is the AJP reviewed on page 21, although cheaper systems are available. Desktop replacements are chunky notebooks, and you'll need to add a mouse and some decent headphones as well.

A desktop replacement offers very similar performance to a desktop PC. Generally their 3D graphics are a little slower than the equivalent desktop graphics card, but not by much.

If you want the ultimate in performance, you're limited to a desktop PC, as there are no twin-card technologies like nVidia's SLI for notebooks.

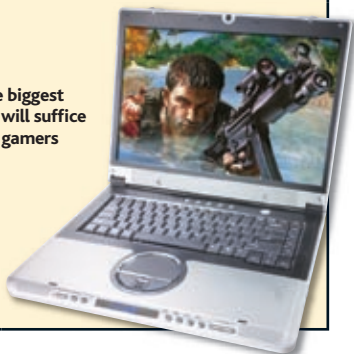
Another issue is the display. Finding out the refresh rate of a notebook display can be tricky. We look for blur when we test a system and will tell you if it's present. When buying a notebook you should find out the screen's response time. Ideally this should be below 16ms.

Most gaming notebooks have widescreen displays, often with different resolutions to desktop monitors. This can cause trouble with older games that do not support widescreen.

Gaming is definitely possible on a notebook these days, but the main hurdle is cost. A similarly specified desktop PC will be faster for the money and is easier and less expensive to upgrade. You may save some space with a notebook, but you will still need a desk and chair to play games for extended periods.

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► Only the biggest notebooks will suffice for serious gamers



REVIEW NOTEBOOK PC

GATEWAY 8550GB

RATING ★★★★★

PRICE £950 inc VAT

SUPPLIER Comet 08716 661616

DETAILS <http://www.uk.gateway.com>



American PC manufacturer Gateway closed its European operation in 2001, citing market conditions. Now it's back, this time selling through major retailers such as Comet. The 8550GB notebook, a deluxe widescreen model, is at the top of its new range.

The chassis looks great. At just 36mm high it's very slim, and it looks just as good with the lid open, as the power button is surrounded by a pleasing blue glow. The touch pad is responsive and has a ridge that separates a scroll bar segment. The widescreen display allows space for a full-sized keyboard with keypad. This is very firm with well-sprung keys and provides positive feedback.

Although the chassis is slim, the 8550GB has all the ports you'd expect. There are four USB2 ports, two on each side of the chassis for ease of use. It also has FireWire, S-video out and Gigabit Ethernet. There's a handy 4-in-1 memory card reader on the front of the chassis next to conveniently placed microphone and headphone sockets. The speakers are pretty basic, though, and will suffice only for Windows alerts.

This notebook's main draw is its large 17.1" widescreen display. The native resolution of 1,440x900 provides lots of space for day-to-day tasks. It did fairly well in our monitor tests. Subtle

but regular banding marred an otherwise smooth greyscale test. Whites were good, but the colours could have done with more subtlety in the lighter shades. The widescreen ratio of 16:10 makes it ideal for viewing DVDs, and playback through the included Power DVD software was very pleasing, with no problems in fast-moving scenes.

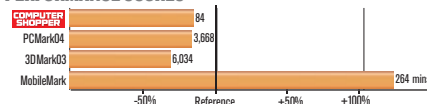
In applications the 8550GB's performance is easily good enough for everyday tasks and it scored 84 overall in our *Shopper* benchmarks. Its large 100GB hard disk should cover all your storage needs. Battery life is usually an issue with a large screen, but the 8550GB managed an amazing 264 minutes in our low-usage test.

Microsoft's upcoming Windows Vista operating system will use 3D graphics on the desktop. Fortunately the X700 graphics included here should be more than up to the task. It'll also run games, although you may need to reduce detail levels to play the latest titles. It managed a very respectable 24.3fps in our tough Doom 3 test.

The 8550GB is not the cheapest notebook on the market, but you get a lot for your money. The large screen means it's not ideal for use on the move, but if you're after a notebook for some entertainment, it's excellent value.

Seth Barton

PERFORMANCE SCORES



✓ 17" widescreen display; great battery life

✗ Screen has subtle banding; large footprint

SPECIFICATIONS 1.73GHz Intel Pentium M 740, 1GB RAM, 100GB hard disk, 128MB ATI Mobility Radeon X700 graphics, DVD+/-RW DL drive, 17.1" widescreen LCD screen, weighs 3.5kg. **Part code** 8550GB

HOTLIST NOTEBOOK PC

ACER Ferrari 4005 WLMi

RATING ★★★★★

PRICE £1,199 inc VAT

SUPPLIER www.acernotebooks.co.uk

DETAILS www.acer.co.uk



The latest notebook in Acer's Ferrari range has more tasteful styling than its previous gaudy efforts. What's more, it's a slim and well-built notebook with impressive 2D and 3D performance.

It is crammed with features such as a double-layer DVD writer and built-in Bluetooth, and it has a huge 100GB hard disk and a gigabyte of RAM.

The soft rubber keyboard surround makes typing very comfortable and the high-resolution screen has excellent contrast and colour saturation. The 4005 WLMi is also good

value, showing that Acer is not charging over the odds for the Ferrari branding, despite the carbon-fibre lid.

SPECIFICATIONS 2.0GHz AMD Turion 64 ML-37, 1GB RAM, 100GB hard disk, ATI Mobility Radeon X700 graphics, DVD+/-RW DL, 1,680x1,050 widescreen LCD, weighs 3.05kg. **Part code** LX.FR405.033



REVIEW NOTEBOOK PC

FUJITSU SIEMENS Lifebook P7010 Limited Edition

RATING ★★★★★

PRICE £1,644 inc VAT

SUPPLIER www.shopfujitsusiemens.co.uk,
0800 161 3060DETAILS www.fujitsu-siemens.co.uk

A notebook PC can get only so small before compromises have to be made. The optical drive is usually the first thing to go, and then the keyboard becomes too small to use comfortably. Fujitsu Siemens' P series Lifebook is just large enough to avoid these compromises. It's a fully featured Centrino notebook in a 261x199x35mm chassis.

This Limited Edition version has a faster 1.2GHz Intel Pentium M 753 Ultra Low Voltage (ULV) processor and 1GB of RAM. It scored a respectable 67 overall in our *Shopper* benchmarks, which isn't a huge score but shows that the P7010 can deal with day-to-day tasks such as office work and web browsing. It can also handle light photo-manipulation and video work but not HD video playback. The efficient ULV processor gave it a decent three hours and 42 minutes of battery life.

The Lifebook crams an astounding 13 ports on its diminutive chassis. It has a card reader that supports SD, MS, MMC and CF formats, making it an ideal companion for the photographer on the move. There's also a FireWire and two USB2 ports for connecting external devices, plus D-sub and S-video outputs to connect a projector or TV.



Modem and Ethernet ports are provided, and the Centrino chipset provides wireless networking. Finally a PC Card slot will enable you to add a 3G mobile card for web access while you're out of the office or away from home.

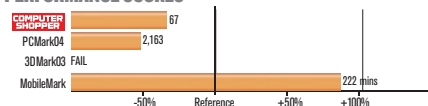
The display is only 10.6" but squeezes in 1,280x768 pixels. At native resolution this produces very sharp text, although you'll need to scale it up if you sit further away at an external keyboard. The display performed well in our tests, producing a smooth greyscale and subtle colours. The white test was passably bright and consistently backlit.

The keyboard is excellent for such a small notebook. It flexes a little when pushed, but feels very firm and positive when typing. The keys are big enough to allow a decent typing speed, and you can just about rest your palms on the edge of the chassis. The touch pad is small and the wrong shape for the widescreen display, though. Below the touch pad is a fingerprint reader for the security conscious.

We like the P series Lifebook and gave it a Most Desirable award in *Shopper* December 2004. It's simply the best small-format notebook we've seen, but at this price you have to ask yourself whether you really need that extra portability.

Seth Barton

PERFORMANCE SCORES



✓ Very small notebook with an optical drive

✗ Not very powerful; very expensive

SPECIFICATIONS 1.2GHz Intel Pentium M 753 ULV, 1GB RAM, 100GB hard disk, 16MB Intel 855GME graphics, DVD+-RW DL drive, 10.6" LCD screen, weighs 1.3kg. **Part code** GPJ-GBR-156252-001.V0D2

HOTLIST NOTEBOOK PC

ELONEX Prowire 121B

RATING ★★★★★

PRICE £956 inc VAT

SUPPLIER [Elonex 08707 801010](http://www.elonex.co.uk)DETAILS www.elonex.co.uk

Elonex's Prowire 121B won a Best Buy award in our Labs test of ultra-portable notebooks in *Shopper* October 2005. It's stylish, slim and incredibly light, weighing just 1.5kg with the standard battery. Its 12.1" LCD is very bright and it comes with a generous 80GB hard disk.

The Prowire 121B offers performance as well as portability. Its 2GHz Intel Pentium M processor is fast enough for most Windows applications, and it even has sufficient power to handle processor-intensive tasks such as video editing. The notebook is supplied with three-cell and six-cell batteries, and while battery life with the three-cell

is poor, the six-cell battery provides more than four hours of computing and adds only 200g to the weight. This is a desirable and powerful notebook and is very good value.

SPECIFICATIONS 2GHz Intel Pentium M 755, 512MB RAM, 80GB hard disk, Intel 855GME integrated graphics, DVD/CD-RW, 12.1" LCD. **Part code** 10-CSH-121

BYTE SIZE!



Our round-up of the best new gadgets and software

TDK

Outloud CD Wallet

RATING ★★★★★

PRICE £15 inc VAT

SUPPLIER www.firebox.comDETAILS www.tdk-europe.com

TDK's Outloud CD wallet holds up to 24 CDs and has a set of built-in stereo speakers. The flat-panel speaker technology makes the entire unit very compact. The speakers are rated at 20W peak power, and we found the sound quality a big step up from that of average laptop speakers. They're quite loud and clear and even manage some bass.

The Outloud connects to your music player through a 3.5mm mini jack on an annoyingly short 30cm lead. A couple of Velcro tags hold the wallet open, making the speaker stand up. The CD wallets then protrude conveniently from the front. This is a well-designed product and is ideal for use with a laptop or portable CD player.

Seth Barton



THRUSTMASTER

Ferrari GT Force Feedback 2 in 1

RATING ★★★★★

PRICE £40 inc VAT

SUPPLIER www.amazon.co.ukDETAILS <http://europe.thrustmaster.com>

A steering wheel is essential for driving game enthusiasts. Thrustmaster's official Ferrari wheel has all the features you need at a reasonable price. The wheel clamps firmly to your desk, although the quick release system doesn't work very well. It has paddle gear changers behind the wheel and floor pedals, although the lead that connects them to the wheel could be longer.

The wheel was easy to set up: we simply plugged it in and then installed the drivers. How well it works with your chosen game is up to the software, as is the Force Feedback, but when it works it really adds to the experience. With PS2 compatibility included, this is a good wheel for the money.

Seth Barton



REVIEW **NOTEBOOK PC****AJP
D900T-X**

RATING ★★★★★

PRICE £2,203 inc VAT

SUPPLIER AJP 020 8208 9744

DETAILS www.ajp.co.uk

AJP won a Best Buy award in our gaming notebooks lab test in *Shopper* June 2005 with its D900T. 3D graphics technology moves quickly, however, and nVidia's GeForce Go 7800GTX has prompted the release of this updated model.

The D900T-X's chassis is massive and weighs 5.5kg so you won't want to carry it far. It's just about light enough to move round the house or take to a friend's house for network gaming. The large chassis also allows space for a full keyboard with keypad. The keyboard is good, with lots of travel and positive feedback. The touch pad is average, but most gamers will use a USB mouse.

Every port we can think of has been provided: there are four USB2 and two FireWire ports, four minijack audio outputs and a range of legacy ports. It also has a 6-in-1 card reader for digital camera users. Finally, S-video and DVI ports are provided, so you can connect the notebook to external displays.

The notebook's own display is a big 17" widescreen. With a native resolution of 1,680x1,050 it provides all the desktop space you'll need. It isn't the brightest screen, so colours lack a little vibrancy, but both the greyscale and colour wheel tests showed very smooth transitions.

The front has built-in audio controls, so you can play CDs without having to boot into Windows.



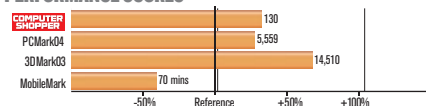
The D900T-X's speakers are better than those on most notebooks, although they're still not good enough for gaming, so we'd advise you to invest in a decent pair of headphones.

In applications its performance is very impressive. With an overall *Shopper* benchmark score of 130, this is the fastest notebook we've ever seen. It's not surprising given the 3.8GHz Pentium 4 670 processor and 3GB of RAM. All this power comes at the expense of battery life, though, which lasted a meagre 70 minutes in our tests.

The AJP's gaming performance also sets a new standard for notebooks. Its 3DMark03 score of 14,510 is only just short of that achieved by similarly equipped desktop computers. Its Doom 3 score of 80.9fps is again in line with desktops. This notebook will let you play games at the highest detail settings for some time to come.

The D900T-X is a great desktop replacement and has tons of 3D power for games. However, in our opinion, this model is over-specified. The 3GB of RAM is unnecessary and AJP could have saved money by using a slower processor. If speed is your only concern, though, the D900T-X is for you.

Seth Barton

PERFORMANCE SCORES

✓ Stunning performance in applications and 3D

✗ Big and heavy; very expensive

SPECIFICATIONS 3.8GHz Intel Pentium 4 670, 3GB RAM, 100GB hard disk, 256MB nVidia GeForce Go 7800 GTX graphics, DVD+/-RW DL drive, 17" LCD screen, weighs 5.5kg. **Part code** D900T-X

HOTLIST **NOTEBOOK PC****MV
Mobeus MV011107**

RATING ★★★★★

PRICE £911 inc VAT

SUPPLIER MV 08718 554668

DETAILS www.go-mv.com

Although it's not quite an ultra-portable, MV's Mobeus MV010652 is an extremely powerful notebook that is still light enough to carry around. Its silver lid may be an acquired taste, but the black interior looks smart and the notebook feels durable. It has an excellent keyboard and is brimming with features, including Bluetooth and a DVD writer. Its reflective widescreen LCD produces saturated colours and very bright whites, but the touch pad is not particularly accurate.

The Mobeus's performance is probably its most impressive aspect. It achieved very high scores in the *Shopper* benchmarks and PCMark04



thanks to its 2GHz Intel Pentium M processor and gigabyte of system memory, and it has over three hours of battery life for travelling.

SPECIFICATIONS 2GHz Intel Pentium M 755, 1GB RAM, 60GB hard disk, integrated Intel 855GME graphics, DVD+/-RW DL, 12.1" widescreen LCD

**BYTE
SIZE!**

Our round-up of the best new gadgets and software

**LEXAR
JumpDrive 256MB
USB 2.0 Expression**

RATING ★★★★★

PRICE £20 inc VAT

SUPPLIER <http://uk.insight.com>DETAILS www.lexar.com

The JumpDrive Expression is a flash memory drive that you can personalise with removable 'mood bands' in three colours: green, yellow and grey-blue.

The bands keep the port cap attached to the drive to stop it getting lost, although other manufacturers have come up with more elegant solutions. Lexar claims that the bands also provide extra protection but this seems fanciful.

Copying 200MB of files to the JumpDrive took almost four minutes, which is about average for a flash drive. The JumpDrive costs about the same as similar-capacity thumb drives from other makers, but if you're looking for a little extra colour, the JumpDrive will appeal.

Alan Lu

**KENSINGTON
PilotMouse Mini Bluetooth**

RATING ★★★★★

PRICE £29 inc VAT

SUPPLIER www.pcwb.comDETAILS www.kensingtonuk.co.uk

The PilotMouse Mini is a diminutive mouse aimed at users of laptops with built-in Bluetooth. As such, it ships without a Bluetooth dongle.

The buttons and clickable scroll wheel feel responsive and the mouse pointer moves almost too quickly when using the Mini. Tracking is jerky at times but no more so than is usual with other mice.

The Mini's rubberised grip and ambidextrous design make it suitable for left- and right-handed people, but its size makes it uncomfortable to use for extended periods.

While the Mini works well for occasional use on the road, it's no replacement for a regular desktop mouse.

Alan Lu





CHOOSING A...

NOTEBOOK
COMPUTER

Follow our simple step-by-step advice to find the perfect notebook PC for your needs and your budget

1 The minimum specification of notebook we recommend, shown below in grey, is a good starting point when working out your ideal system. This is an average notebook that should cost around £700. It is not particularly powerful or, at 3.5kg, particularly portable. Mobile processors increase battery life and are becoming more common, even at this price.

2 Most people want a better notebook than the minimum – but what is your definition of better? Do you want something more powerful, or lighter and better-looking? Desktop replacement notebooks, which approach the power of a full-size PC, are necessarily large to house the extras. These usually include a desktop processor and larger battery to keep the whole lot running for any length of time.

3 If portability is your main priority, keep the spec modest (a Pentium M 1.7GHz with a 15" screen, say) but spend more. This will buy you an executive notebook with the kind of cutting-edge design required to miniaturise without compromising usability. Clever chassis, expensive batteries and the finest materials are prerequisites for superior ultra-portable notebooks.

4 There are features you can add to a notebook without piling on weight or reducing battery life. A 60GB, 80GB or 100GB hard disk and 1GB of RAM won't hurt. Another possibility is an external drive that you can carry with you or leave at home according to the nature of your trip. Some ultra-portables can attach to an optional docking station, which incorporates drives, ports and extra power for when you need it. It's the best of both worlds, but tends to be expensive.

5 If you're not swayed by ultra-portable chic, you can get a lot more for your money. Today's desktop replacements pile on the features but still keep the price well under £1,500. Alternatively, go for a balanced package: middling power and price in a reasonably portable package. Which one you pick depends on how much power and which features you need, so consider each in turn.

6 Notebooks run the same software as desktops, so our advice on the core specification is the same (see page 16). However, hard disks go up to only

100GB and even the best notebook graphics lag slightly behind desktops.

7 DVD rewriter drives are standard and will allow you to burn CDs and DVDs on the move. If you want to watch movies, consider buying a notebook with a widescreen display.

8 A 1,024x768 screen is the entry level these days, but its size will depend on the notebook's purpose. Ultra-portables might have screens as small as 9". Widescreen displays have resolutions of 1,200x768 upwards but make for a bulkier notebook.

9 A modem and regular 10/100 Ethernet port are standard. Centrino notebooks also have wireless 802.11b or 802.11g networking (WiFi), and it's becoming increasingly popular on all models. IEEE-1394 (FireWire) and Bluetooth can be added to the default TV-out and USB2.0 ports. Memory card readers are extremely common, so check that your camera or MP3 player's format is supported.

10 Once you're happy with your spec, start to shortlist some models you can afford. Check the weight and battery life of each of them. If these aren't acceptable, you need to reconsider how much power and which features you really need.

FILL IN YOUR SPECS HERE

(Recommended minimum in grey)

PROCESSOR: Intel Celeron 2.66GHz

MEMORY: 512MB DDR

HARD DISK: 40GB

STORAGE: DVD rewriter

GRAPHICS: Integrated
(using system memory)

SCREEN: 1,024x768 LCD

EXTRAS: Wireless networking, FireWire

CONNECTORS: Three USB2, network,
modem

SOFTWARE: Windows XP Home Edition

WEIGHT: 3.5kg

BYTE
SIZE!

Our round-up of the best new gadgets and software

MEMOREX
4GB Mega Traveldrive

RATING ★★★★★

PRICE £99 inc VAT

SUPPLIER www.amazon.co.uk

DETAILS www.memorexlive.com

The Mega Traveldrive is a light, matchbox-sized portable hard disk with a swivelling USB plug. It's slightly smaller than Seagate's 5GB USB 2.0 Pocket Hard Drive, which we reviewed in *Labs, Shopper* June 2005, and is about as fast.



The Traveldrive is quite thick so you may need an extension cable to connect it to your PC, but none was provided. The drive is formatted, so it's ready to use straight away.

It is cheaper than similar-capacity thumb-sized drives but isn't as good value as larger portable hard disks. If it were cheaper, the Traveldrive would be an attractive little disk.

Alan Lu

TRUST
7 Port USB2 Powered Hub

RATING ★★★★★

PRICE £19 inc VAT

SUPPLIER www.cannings.co.uk

DETAILS www.trust.com



It's easy to run out of USB ports on your PC but Trust's 7 Port USB2 Powered Hub lets you add enough extra ports to cope with all your peripherals.

It's slick and attractively designed for a USB hub and will sit neatly on the desk. All seven of the USB2 ports are located at the front, so connecting devices couldn't be easier.

As the hub is powered you can connect any peripheral to it, including USB thumb drives, which draw a lot of power and often fail to work in unpowered hubs. Perhaps the best thing about this peripheral is its price. Considering the number of extra ports you get, along with a power adaptor, it's a real bargain.

David Ludlow

